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No.

In the Supreme Court of the United States

PSEG FOSSIL LLC AND PSEG NUCLEAR LLC,
PETITIONERS,

v.

RIVERKEEPER INC, ET AL.,
RESPONDENTS.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Whether the Second Circuit erred by holding that §316(b) of the Clean Water Act, 33 U.S.C. §1326(b), bars any use of cost-benefit analysis, in conflict with decisions of several other circuits and the precedents of this Court.

2. Whether the Second Circuit erred by concluding that §316(b) bars the use of restoration measures as a compliance alternative to "minimiz[e] adverse environmental impact," in conflict with decisions of other courts of appeals.

RULE 29.6 STATEMENT

Petitioners PSEG Fossil LLC and PSEG Nuclear LLC (collectively, "PSEG") are wholly-owned by PSEG Power LLC. PSEG Power LLC is wholly owned by Public Service Enterprise Group Incorporated, which is a publicly traded company.

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OPINION BELOW

The Second Circuit's opinion (App.1a-86a) is reported at 475 F.3d 83.

JURISDICTION

The Second Circuit entered judgment on January 25, 2007, and denied petitions for rehearing and rehearing *en banc* on July 5, 2007. Justice Ginsburg extended the time to file this Petition until November 2, 2007. This Court has jurisdiction pursuant to 28 U.S.C. §1254(1).

STATUTORY AND REGULATORY PROVISIONS INVOLVED

Section 316(b) of the Federal Water Pollution Control Act ("Clean Water Act" or "CWA") states:

> Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.

33 U.S.C. § 1326(b).[1] Relevant portions of CWA §§301, 304, and 306, 33 U.S.C. §§1311, 1314, 1316, are set forth in the Appendix.

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[1] We refer to CWA sections ("§316(b)") and, where appropriate, provide citations to the U.S. Code ("33 U.S.C. §1326(b)").

STATEMENT OF THE CASE

Many power plants and industrial facilities are built on bodies of water so they can circulate water through their equipment to absorb heat. "Once-through" cooling systems used by most existing plants are far more cost- and energy-efficient than "closed-cycle cooling" systems (which recirculate water through cooling towers) or dry/air cooling systems, but they require more water and thus potentially have a greater impact on aquatic life.

Under CWA § 316(b), "[a]ny standard established" under §§301 and 306 to regulate a discharge to navigable waters from a "point source" must also require "that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. §1326(b). In implementing this provision for 30 years, EPA relied on the "best professional judgment" of federal and state permitting authorities, which took into account site-specific conditions and impacts and the capabilities of individual facilities. Consistent with the broad discretion granted by §§301 and 306 (in conjunction with §304) to consider "the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate," 33 U.S.C. § 1314(b)(2)(B), permitting authorities considered both costs and environmental benefits when setting design and construction requirements. Facilities have in turn relied on those permits in making enormous capital investments.

In response to a 1995 consent decree, EPA agreed to promulgate nationwide regulations governing

cooling water intake structures in three phases—Phase I for new facilities, Phase II for large *existing* power plants, and Phase III for other existing facilities and new offshore oil and gas facilities. In the Phase I Rule, EPA exercised its discretion to require closed-cycle cooling for new facilities, and was upheld by the Second Circuit in *Riverkeeper, Inc. v. EPA*, 358 F.3d 174 (2d Cir. 2004) ("*Riverkeeper I*"). The Phase III Rule implements §316(b) on a case-by-case basis for existing facilities not covered by the Phase II Rule, and is currently under review in the Fifth Circuit. *ConocoPhillips v. EPA*, Nos. 06-60662 *et al.*

This case involves the Phase II Rule, promulgated at 69 Fed. Reg. 41,576 (July 9, 2004). EPA collected and analyzed technological, biological, and economic data about operations at existing power plants. *Id.* at 41,585. It determined that a "significant degree of flexibility" was necessary to account for the wide variability in the size, location, operations, and environmental impacts of the approximately 550 Phase II facilities—comprising more than 50% of the Nation's electric capacity—to avoid the staggering costs, complexities, and lost generating capacity associated with imposing a closed-cycle cooling retrofit requirement on all of those facilities. *Id.* at 41,591, 41,593. EPA accordingly established national performance standards and five "compliance alternatives" to meet them—including restoration measures to enhance fish habitat, and site-specific "best technology available" determinations based on a cost-benefit test. *Id.* at 41,592-93 (Exh. V-2), 41,598.

In particular, EPA rejected a national closed-cycle cooling retrofit requirement. EPA estimated that such a requirement would impose retrofit costs as high as

$200 million, and up to $20 million annually in additional operating costs, *per facility*—but noted that actual costs could be at least double those estimates. *Id.* at 41,605. PSEG estimates that closed-cycle retrofit costs—design, construction, operation, and lost generation—could easily total $1 billion at some facilities. *See infra* at 33. EPA also emphasized the U.S. Department of Energy's conclusion that 20 new 400-megawatt generating plants might be required to replace the generating capacity lost from converting all Phase II facilities to closed-cycle technology. *See infra* at 11.

The Second Circuit struck down core provisions of the Phase II Rule, reasoning (a) that since Congress did not expressly authorize cost-benefit analysis, the bare language of §316(b) forbids it, and (b) that §316(b) bars EPA from authorizing compliance through the use of restoration measures. App.18a-25a (*"Riverkeeper II"*). Both holdings misunderstand the broad discretion accorded to EPA by relevant provisions of the CWA, fail to defer to EPA's interpretation, and conflict with decades of consistent practice by EPA and States with delegated authority, as well as the settled precedent of other circuits.

PSEG operates seven Phase II facilities, including the Salem Generating Station in New Jersey. Since 1994, Salem has met its §316(b) compliance obligations, in part, through one of the world's largest privately-funded restoration projects. As a condition of its permit issued by New Jersey, PSEG purchased thousands of acres of degraded wetlands—including "diked" wetlands previously converted into farmland, and wetlands impacted by invasive species—and has undertaken a massive program to restore and/or

enhance them, ensuring their permanent protection through deeds and/or conservation restrictions in New Jersey and Delaware. That program, on which PSEG has spent more than $100 million, produces far more direct, longer-lasting benefits to aquatic life and the environment than could be achieved by modifying the intake system alone. The Second Circuit's decision, if allowed to stand, would eliminate the use of this program (and many others) as a compliance tool, jeopardizing the extensive benefits to aquatic life achieved by Salem (and recognized by New Jersey) in the Delaware Estuary. It may also force PSEG's facilities, as well as all Phase II facilities, either to close or to convert to closed-cycle cooling at a total cost of *billions* of dollars, even though EPA has determined that this technology would provide only marginal additional benefits to aquatic life, while creating other adverse energy and environmental impacts.

I. STATUTORY BACKGROUND

EPA has implemented §316(b) through the National Pollutant Discharge Elimination System ("NPDES") program, under which facilities discharging pollutants from a "point source" must obtain a permit under CWA §§301 and 306. *See* 33 U.S.C. §§1311, 1314, 1316. But unlike §§301 and 306, §316(b) addresses the "adverse environmental impact" caused by the *withdrawal* of water. 33 U.S.C. §1326(b).

Section 301 required EPA to set effluent limitation guidelines for existing facilities by 1977 based on the "best practicable control technology currently available" ("BPT"). 33 U.S.C. §1311(b)(1)(A). By 1989, EPA had to base effluent guidelines for existing facilities on the "best conventional pollutant control

technology" ("BCT") for conventional pollutants and the "best available technology economically achievable" ("BAT") for toxic and non-conventional pollutants. *Id.* §1311(b)(2)(A), (E); 40 C.F.R. §125.3(d). For new facilities, §306 requires EPA to establish performance standards based on the "best available demonstrated control technology" ("BADT"), 33 U.S.C. §1316(a)(1), a higher standard reflecting Congress's understanding that it is far more feasible and economical to install technologies when a facility is being constructed. *See Riverkeeper I*, 358 F.3d at 185; 69 Fed. Reg. at 41,628.

The CWA does not define these standards or mandate specific technologies. Rather, in §304 Congress enumerated the factors EPA must consider in selecting BPT, BCT, and BAT for existing facilities, and entrusted EPA with broad discretion to consider other "appropriate" factors. 33 U.S.C. §1314(b). In determining BAT, EPA must consider:

> [T]he age of equipment and facilities involved ... *the cost of achieving such effluent reduction*, non-water quality environmental impact (*including energy requirements*), and *such other factors as [EPA] deems appropriate.*

Id. §1314(b)(2)(B) (emphasis added). Section 304 requires these same "consideration factors" for BPT and also mandates "consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such [technology]." *Id.* §1314(b)(1)(B). Similarly, for BCT, EPA must "consider[] ... the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits

derived," in addition to the core consideration factors and "such other factors as the Administrator deems appropriate." *Id.* §1314(b)(4)(B). In determining BADT for new facilities, EPA must consider "the cost of achieving such effluent reduction, and any non-water quality, environmental impact and energy requirements," and thus is permitted to evaluate costs in relation to benefits. *Id.* §1316(b)(1)(B); *Riverkeeper I*, 358 F.3d at 195-96. As these provisions make clear, EPA may "consider a technology's cost in determining whether it is 'practicable,' 'economically achievable,' or 'available.'" *Riverkeeper I*, 358 F.3d at 185.

Congress also did not define "best technology available" in §316(b), but (as *Riverkeeper II* acknowledges) the explicit statutory cross-reference to §§301 and 306 indicates that it meant §316(b) to be understood in light of the similar "technology" language used in those provisions. For Phase II facilities, EPA looked to §§301 and 304—and specifically to the BAT requirement—in establishing BTA. 69 Fed. Reg. at 41,583.

Intake systems may "impinge" aquatic organisms by trapping them, by the force of the water withdrawal, against screens or other parts of the intake structure. It may also "entrain" them—pulling small fish and shellfish, including eggs and larvae, into and through the cooling water system. Impingement and entrainment cause losses of early life stages of fish and shellfish. *Id.* at 41,586-87. To minimize these effects and comply with §316(b), facilities historically have utilized equipment-based technologies (*e.g.*, barrier systems and screens to exclude aquatic organisms), operational measures (*e.g.*, reductions in water velocity), and/or restoration measures (*e.g.*, the

conservation, creation, and/or rehabilitation of aquatic habitats to increase fish and shellfish populations).

The amount of cooling water needed for different systems varies dramatically—with once-through systems requiring the most and dry cooling virtually none. Water usage is only one consideration, however, as closed-cycle and dry cooling systems are extraordinarily more expensive than once-through cooling, reduce electric generating capacity (resulting in an "energy penalty"), may require *more* electric generators to operate, and often create additional adverse environmental impacts (such as undesirable air emissions resulting from greater use of fossil fuels). *Id.* at 41,605-06.

II. SECTION 316(b) REGULATION AND JUDICIAL PROCEEDINGS

A. Phase I Rule

EPA promulgated the Phase I Rule governing BTA determinations for new facilities in 2001. In 2004, the Second Circuit generally approved the Phase I Rule, but held that EPA exceeded its authority by allowing new facilities to comply with §316(b) through restoration measures. *See Riverkeeper I*, 358 F.3d at 189-91 (remanding restoration provision). The Second Circuit upheld EPA's determination that closed-cycle cooling is the "best technology available" for new facilities, even though EPA had found that dry cooling was superior in "'dramatically reduc[ing] impingement and entrainment." when compared to closed-cycle cooling. *Id.* at 194-95 & 195 n.22 (citation omitted). Endorsing EPA's consideration of the relative costs and environmental benefits, the Second Circuit

reasoned that "while ... dry cooling is 95 percent more effective [at eliminating entrainment] than closed-cycle cooling, it is *undeniably relevant* that that difference represents a *relatively small improvement* ... at a *very significant cost*." *Id.* at 194 n.22 (emphasis added).

B. Phase II Rule

1. Phase II Rulemaking

EPA promulgated the Phase II Rule in 2004.

Cost-Benefit Considerations. For existing facilities, EPA established national performance standards that consist of "ranges of reductions" in impingement mortality and/or entrainment from a facility's baseline estimate ("calculation baseline"). 69 Fed. Reg. at 41,590; *see also id.* at 41,683-84. Although EPA anticipated that many facilities could meet the standards using equipment-based technologies and/or operational measures, it determined that a single approach for all Phase II facilities did not make sense. *Id.* at 41,590. Instead, EPA determined that a "range of technologies" was both "commercially available" for the industry and most appropriate in light of the wide variability among existing facilities. *Id.* at 41,599. It established five compliance alternatives—four based on meeting the performance standards, and the fifth allowing a "site-specific determination" of BTA to address unique, facility-specific factors. *Id.* at 41,591, 41,685-87. A facility could, for example, demonstrate that it had reduced its intake flow "commensurate with" closed-cycle cooling; demonstrate that it would install technologies, operational measures, and/or restoration measures to meet the performance standards; or qualify for a site-specific determination

based on a "cost-cost" or "cost-benefit" test. *Id.* at 41,591, 41,603.

As part of this analysis, EPA rejected closed-cycle cooling (and, for that matter, dry cooling) as BTA for all Phase II facilities due to its "high costs (due to conversions), the fact that other technologies approach [its] performance, [and] concerns for energy impacts due to retrofitting," among other considerations. *Id.* at 41,605.

EPA concluded that it had authority to implement §316(b) in this manner for several reasons. First, because the "best technology available" standard in §316(b) is linguistically similar to the "best available technology" standard in §301, *and* because §316(b) expressly cross-references that provision, EPA "look[ed] to section 301 and, ultimately, section 304 for guidance." 69 Fed. Reg. at 41,583. EPA considered the statutory factors listed in §§301 and 304, including costs *and* environmental benefits, as appropriate, consistent with its longstanding practice in establishing §316(b) limits in individual permits. *Id.*

Second, the §316(b) legislative history instructs EPA to make its BTA determinations after assessing the "economic practicability" of possible technologies—"including [their] economic impact and the relationship of costs with benefits." *Id.* at 41,604 (citing 118 Cong. Rec. 33,762 (1972) (statement of Rep. Clausen)). To that end, EPA "conducted extensive analyses" of the Rule's economic impacts to ensure that the costs of the chosen technologies were economically practicable. *Id.* EPA concluded that it was appropriate to require "some reasonable relationship" between "the cost of ... 'control technolog[ies]'" and "the environmental benefits associated with [their] use." *Id.*; *see also id.* at

41,606. EPA also analyzed each technology's efficacy, availability, and non-water quality environmental impacts, including energy impacts. *See* 69 Fed. Reg. at 41,604.

On this basis, EPA rejected both a national and waterbody-specific requirement for closed-cycle cooling. *Id.* at 41,605-07. EPA reviewed and adopted extensive evidence showing that the costs of mandatory closed-cycle retrofits would be exceedingly high—ranging, per facility, from an estimated $130 to $200 million in capital costs and $4 to $20 million in annual operating costs. *Id.* at 41,605. EPA also acknowledged that actual costs could be "*at least twice* those projected" because its estimates did not reflect "significant cost[s]," such as acquiring land for cooling towers. *Id.* (emphasis added). EPA also considered detailed information about the energy impacts and the "significant" facility down time associated with retrofits to closed-cycle cooling, including the Department of Energy's determination that approximately 20 400-megawatt plants would be required to compensate for lost generating capacity. *Id.*; App.154a.

Restoration. EPA also decided that nothing in §316(b) required it to abandon its long-standing authorization of restoration measures as a compliance alternative for existing (as opposed to new) facilities. 69 Fed. Reg. at 41,627-28. EPA determined that restoration (like other technologies independent from the intake structure) "reflect [BTA]" by influencing the design of the intake, and that §316(b)'s unique ecological standard ("minimiz[e] adverse environmental impact") considers not only impingement and entrainment, but also compensation

for those losses. *Id.* at 41,628. EPA explained that the Phase I remand did not foreclose this option for existing facilities, which have a "narrower" range of technologies "available" than new facilities. *Id.* EPA also made the Phase II restoration provision more stringent than in the Phase I Rule, by requiring facilities to demonstrate that their projects produce ecological benefits (fish and shellfish) for their waterbody or watershed at a level "substantially similar to," or greater than, the level achieved through the use of other technologies or operational measures. *Id.* at 41,627.

2. Phase II Proceedings Below

Environmental and state petitioners challenged EPA's conclusions, arguing that closed-cycle cooling is the "best technology available" for all Phase II facilities, and that EPA lacks authority to choose BTA on the basis of cost-benefit analysis and to authorize use of restoration measures.

The Second Circuit held that "[i]f ... EPA construed the statute to permit cost-benefit analysis, its action was 'not based on a permissible construction of the statute.'" App.33a (quoting *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 843 (1984)). After interpreting §316(b) in light of §§301, 304, and 306, it reasoned that "[c]ost-benefit analysis ... is not permitted" under §316(b) because "Congress has already specified the relationship between cost and benefits," and that "'[w]hen Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute.'" App.24a, App.22a-23a (citation omitted). The court of appeals "remand[ed] for clarification ... and possibly for a new

determination of BTA." App.33a. Giving no weight to EPA's interpretation, it also held that §316(b) barred restoration measures because (in its view) compensation for harm cannot be "minimiz[ation]" and restoration measures are not "intake structure technology." App.40a-45a.

C. Phase III Rule

In June 2006, EPA promulgated the Phase III Rule, governing existing facilities not covered under Phase II and new offshore oil and gas facilities. EPA determined that the "cost-benefit ratios" of the proposed national standards were "unacceptable," and the "best approach" for Phase III facilities is case-by-case determinations using best professional judgment. 71 Fed. Reg. 35,006, 35,014-15, 35,017 (June 16, 2006). In basing "this decision on its judgment that the monetized costs [of national standards] ... are wholly disproportionate to the monetized environmental benefits," *id.* at 35,017, EPA explicitly grounded its Rule on the same cost-benefit analysis rejected by the Second Circuit.

The environmental plaintiffs have argued to the Fifth Circuit (as they did here) that EPA's cost-benefit considerations violated §316(b). The United States has forcefully defended EPA's right to engage in cost-benefit analysis under §316(b), arguing that "[n]othing in [§316(b)] unambiguously forbids costs-benefit analysis," U.S. Br. at 58, and that "the Second Circuit's construction of Section 316(b) ... is incorrect," *id.* at 61. Similarly, in this proceeding, the United States has explained that *Riverkeeper II* "oversteps the courts' bounds under [*Chevron*] by confining the agency's consideration of costs to two specific inquiries not

mandated by the statute's text, structure, or history." App.194a.

REASONS FOR GRANTING THE WRIT

The Second Circuit's decision invalidated two of EPA's most valuable policy tools: cost-benefit analysis and restoration measures. On several critical issues, its analysis directly conflicts with the reasoning and/or holdings of virtually every court that has ever addressed these issues. Its holding threatens to require all large existing power plants to retrofit to expensive, impracticable "closed-cycle cooling" systems (or shutdown altogether), even though EPA has determined that any expected environmental benefits are not remotely worth the billions of dollars in retrofitting costs. It also leaves EPA faced with conflicting and irreconcilable precedents from different circuits as it struggles to articulate nationwide standards.

Several aspects of the Second Circuit's reasoning are deeply flawed and merit review. First, it held that EPA lacks discretion to consider costs and benefits under §316(b)—and also under §§301 and 306, which regulate the discharge of pollutants. In the Second Circuit's view, "best technology available" under §316(b) requires EPA to mandate the height of possible technology for minimizing impingement and entrainment, without regard to ecological significance and even if it will bankrupt numerous individual power plants, so long as the industry as a whole could plausibly "bear" the costs. It also held that the BAT standard under §301 (for existing facilities) and the BADT standard under §306 (for new facilities) require a similarly maximalist approach.

Those holdings ignore the complexity of the statutory terms and structure and the deference owed to EPA. Congress did not intend this result, EPA does not want it, and the negative economic and environmental consequences will be severe. Indeed, since EPA and States establish a "standard" for a facility's intake structure whenever they approve NPDES permits, the Second Circuit's faulty reasoning would presumably require facilities to redo infrastructure investments that may cost hundreds of millions of dollars after each permit cycle (typically five years), if the steady progress of technology has made some slight advance in fish protection possible. The Second Circuit's interpretation of §316(b) directly conflicts with the First Circuit's landmark decision in *Seacoast Anti-Pollution League v. Costle*, 597 F.2d 306 (1st Cir. 1979), which for nearly 30 years recognized EPA's authority to consider costs and benefits under §316(b). Its reading of §§301 and 306 also directly conflicts with decisions of the Sixth and D.C. Circuits, and is inconsistent with the reasoning of many other courts of appeals.

Second, the Second Circuit adopted a clear statement rule that presumes Congress does not intend to permit cost-benefit analysis unless it "expressly permit[s] the Agency to consider the relationship of [costs and benefits]" on the face of the statute. App.22a. It based that error on a misreading of this Court's decision in *American Textile Manufacturers Institute, Inc. v. Donovan*, 452 U.S. 490 (1981), which held only that if the statute is silent, an agency is not *required* to engage in cost-benefit analysis. As the United States has explained to the Fifth Circuit in the pending Phase III litigation, "[b]y assuming Congress's

silence in Section 316(b) amounts to a prohibition on EPA's authority, the Second Circuit turns the principle of *Chevron* deference on its head." U.S. Br. at 61. This unprecedented holding conflicts with the settled law of several other circuits that have properly recognized that when a statute is silent or ambiguous the relevant agency is entitled to decide for itself whether cost-benefit analysis is appropriate. It drastically curtails the discretion that Congress intended to provide agencies and threatens the validity of countless regulations.

Third, the Second Circuit's restoration holding conflicts with the previously unanimous consensus that agencies may authorize restoration measures where the relevant statute is silent or ambiguous. Indeed, the *Riverkeeper* cases appear to be the first in which any circuit court has ever concluded that restoration measures may not be considered. Once again the Second Circuit fails to engage with the complexity of these problems and the range of practical solutions. Restoration measures "minimiz[e] adverse environmental impact" because they produce ecological benefits equivalent to the level a facility would achieve by using other technologies or operational measures. Restoration measures have not only been an indispensable part of §316(b) compliance for existing facilities since the 1980s, but they are crucially important to the federal government's implementation of numerous environmental statutes. The Second Circuit's analysis directly conflicts with the First Circuit's interpretation of §316(b) in *Seacoast*, and cannot be reconciled with the holdings of numerous other courts of appeals that have affirmed the legitimacy of restoration measures.

This case raises issues of great national importance. The Second Circuit's decision dramatically curtails EPA's discretion in setting national environmental priorities. It creates enormous nationwide uncertainty, for both industry and regulators, about the legality of cost-benefit tradeoffs embodied in CWA permits (and attendant infrastructure investments) going back three decades. If EPA concludes from the court's analysis that no technology other than closed-cycle cooling is permissible, the resulting retrofit would cost existing facilities tens of billions of dollars that they otherwise could spend on important environmental priorities. It would cause reductions in generating capacity and increase air pollution by, among other things, forcing nuclear plants with near-zero emissions offline for extended periods. And it would jeopardize our Nation's already fragile, overstretched electric delivery system by (as the Second Circuit concedes) pushing older or marginally-profitable facilities into bankruptcy or early closure.

Because EPA has completed this Phase II rulemaking, and the United States and industry participants would not be able to seek certiorari if they prevail in the Phase III litigation pending in the Fifth Circuit, this case may be the only practical vehicle for this Court to resolve these important issues.

I. THE SECOND CIRCUIT'S COST-BENEFIT HOLDING IS INCORRECT AND CONFLICTS WITH DECISIONS OF OTHER CIRCUITS

This Court has repeatedly explained that a reviewing court should defer to an agency's interpretation of the statute it administers if Congress

has not "directly spoken to the precise question at issue" and the agency's interpretation is permissible. *Chevron*, 467 U.S. at 842-43. The Second Circuit concluded that any consideration of costs in relation to benefits rendered EPA's construction of §316(b) impermissible, for several reasons—including that the text of the statute supposedly precludes cost-benefit analysis; that it never explicitly authorizes cost-benefit analysis; and that a cross-reference to §§301 and 306 suggests that Congress intended to preclude cost-benefit analysis under §316(b). All of those reasons are deeply flawed and conflict with decisions of other courts of appeals.

A. The Statutory Structure Supports EPA's Use Of Cost-Benefit Analysis

The Second Circuit rested its holding primarily on inferences from §316(b)'s cross-reference to §§301 and 306, and a misunderstanding of what those sections provide. It reasoned that the "best technology available" language in §316(b) is "linguistically similar to the BAT standard of section 301 and the [BADT] standard that applies to new sources under section 306," and that therefore "to the extent that cost-benefit analysis is precluded under those statutes, one might reasonably conclude that it is similarly not permitted under section 316(b)." App.21a. The Second Circuit asserted that this Court's decisions in *EPA v. National Crushed Stone Ass'n*, 449 U.S. 64 (1980), and *American Textile* interpreted §§301 and 306 to prohibit cost-benefit analysis. It then leapt from its observation that "one might reasonably conclude that it is similarly not permitted under section 316(b)" to a holding that EPA has no discretion to reach any other conclusion.

That reasoning piles error upon error. First, as a careful reading of *Crushed Stone* and *American Textile*—and even the Second Circuit's opinion in this very case—will reveal, cost-benefit analysis certainly is not prohibited under §§301 and 306. Congress provided the relevant criteria for setting BAT (as well as BCT and BPT) standards in §304, and they expressly include costs and benefits, as well as any other factors EPA "deems appropriate." *Supra* at 6-7; *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1045 (D.C. Cir. 1978). As the D.C. Circuit observed, "the statute directs [EPA] only to 'take into account' the consideration factors," and thus "on its face lets EPA relate the various factors as it deems necessary." 590 F.2d at 1046.

The same is true for BADT under §306, which contains language "virtually identical to ... section 304(b)(2)(B)." *Am. Iron & Steel Inst. v. EPA*, 526 F.2d 1027, 1059 (3d Cir. 1975). Like §304, §306 does not mandate a structure for analyzing costs, and instead includes "the cost of achieving such effluent reduction" as a consideration factor. *See* 33 U.S.C. §1316(b)(1)(B); *Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 559, 563 (D.C. Cir. 2002); *Reynolds Metal Co. v. EPA*, 760 F.2d 549, 565 (4th Cir. 1985); *CPC Int'l, Inc. v. Train*, 540 F.2d 1329, 1341-42 (8th Cir. 1976); *Am. Iron & Steel Inst.*, 526 F.2d at 1059.

EPA obviously is not *required* to engage in cost-benefit analysis under §§301 and 306. That is all this Court meant in *Crushed Stone* when it said that in "assessing BAT total cost is no longer to be considered in comparison to effluent reduction benefits." 449 U.S. at 71. As the Fifth Circuit has explained, *Crushed Stone* stands only for the proposition that "EPA is *not*

obligated to evaluate ... the relationship between costs and benefits." *Tex. Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 936 (5th Cir. 1998) (citing *Crushed Stone*, 449 U.S. at 71) (emphasis added). Numerous circuits have recognized that EPA is not *required* to consider costs and benefits when setting BAT. *See, e.g., Rybachek v. EPA*, 904 F.2d 1276, 1290-91 (9th Cir. 1990); *Am. Petroleum Inst. v. EPA*, 787 F.2d 965, 972 (5th Cir. 1986); *Reynolds Metal Co.*, 760 F.2d at 565; *Weyerhaeuser*, 590 F.2d at 1046-47. But until this case, no court has ever held that EPA is *prohibited* from considering costs in relation to benefits. *Cf. Ass'n of Pac. Fisheries v. EPA*, 615 F.2d 794, 818 (9th Cir. 1980) (suggesting in dicta that Congress "did not intend the Agency ... to engage in marginal cost-benefit comparisons"). The cases strongly suggest that cost-benefit analysis is permissible, since EPA may "relate the various factors as it deems necessary." *Weyerhaeuser*, 590 F.2d at 1046.

Indeed, the Sixth Circuit has explicitly held that the §304 "consideration factors" allow EPA to use cost-benefit analysis in setting BAT. *See BP Exploration & Oil, Inc. v. EPA*, 66 F.3d 784, 796 (6th Cir. 1995); *supra* at 6-7. Citing *Weyerhaeuser*, the Sixth Circuit concluded that environmental petitioners were "wrong to contend that EPA is not permitted to balance factors such as cost against effluent reduction benefits." 66 F.3d at 796. The court added that BAT standards "must be acceptable on the basis of numerous factors, only one of which is pollution control." *Id.* It therefore upheld EPA's rejection of a standard based upon "unacceptably high economic" costs. *Id.* The D.C. Circuit has approvingly cited *BP Exploration* and adopted its reasoning that EPA has "considerable

discretion to weigh and balance the various factors required by [CWA]." *Nat'l Wildlife Fed'n*, 286 F.3d at 570. The D.C. Circuit also held that the CWA "cannot logically be interpreted to impose on EPA a specific structure of consideration or set of weights because it gave EPA authority to 'upset' any such structure by exercising its discretion to add new factors to the mix." *Weyerhaeuser*, 590 F.2d at 1046. The Sixth and D.C. Circuits, at a bare minimum, would have decided this case differently.

Instead of permitting "EPA [to] relate the various factors as it deems necessary," *id.*, the Second Circuit has erroneously imposed a single acceptable framework for consideration of costs (what it calls "cost-effectiveness"), and has denied EPA discretion to use any other method. As the United States has explained to the Fifth Circuit in the pending Phase III case, "because nothing in Section 316(b) specifies what weight EPA should give to [individual factors] ... the Second Circuit erred in concluding that Congress defined the relationship between costs and benefits." U.S. Br. at 59. The cross-reference in §316(b) and linguistic similarity to the BAT standard in §301 clearly support EPA's discretion to use cost-benefit analysis under §316(b). The Second Circuit's contrary conclusion is inconsistent with the statute and with decisions of at least two other courts of appeals, and (as explained in greater depth below) will be enormously disruptive.[2]

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[2] The Second Circuit's decision is also hard to reconcile with its decision in *Riverkeeper I* that dry cooling is unnecessary for Phase I facilities. In *Riverkeeper I*, the panel approved EPA's rejection of dry-cooling and described supporting cost-benefit considerations as "logical," "relevant," "only fair to note," "a useful

B. The Text And Legislative History Of §316(b) Supports EPA's Discretion To Use Cost-Benefit Analysis

The Second Circuit's arguments from the statutory language are no more persuasive, and are inconsistent with the settled precedents of other circuits.

The Second Circuit held here that EPA may consider costs when setting standards under the CWA only in two ways: (1) "to determine what technology can be 'reasonably borne' by the industry" as a whole, without regard to whether that technology will bankrupt any particular facility, App.23a, and (2) "to engage in cost-effectiveness analysis in determining BTA," *id.*, by which it means that within "a narrowly bounded range" EPA "may permissibly choose between two (or more) technologies that produce essentially the same benefits but have markedly different costs," App.25a. The court of appeals apparently drew the first principle from the word "available" in §316(b)—reasoning that "technology that cannot ... be reasonably borne by the industry is not 'available' in any meaningful sense." App.21a. It drew the second principle from the word "best," theorizing that a technology that fails to achieve the greatest possible reduction in impingement and entrainment cannot be the "best technology available."

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perspective" and "undeniably relevant." 358 F.3d at 194-95 & 194 n.22 (also endorsing the Sixth Circuit's reasoning in *BP Exploration*.) But in this case the panel expressly (if unconvincingly) disavowed any reading of *Riverkeeper I* that would be consistent with cost-benefit analysis. App.22a n.11. The full court denied rehearing *en banc* after this tension was brought to its attention, and thus stands behind the panel's decision.

Even if that were a plausible reading, it is not the *only* plausible reading—and EPA may interpret the statute differently. The Second Circuit effectively concedes that "available" does not mean literally possible, but rather "reasonably available" in some economic sense. App.21a-25a. Surely EPA is entitled to make this determination based on its own economic analysis. 69 Fed. Reg. at 41,585. And Congress's use of the word "best" certainly does not preclude cost-benefit analysis; Congress has even used the word "best" in CWA standards for which cost-benefit analysis is *mandatory*. *See* 33 U.S.C. §1314(b)(1)(B) (mandating cost-benefit analysis for "best practicable control technology"); *see also BP Exploration*, 66 F.3d at 796 ("CWA's requirement that EPA choose the 'best' technology does not mean that the chosen technology must be the best pollutant removal."). In the context of a statute that authorizes EPA to consider many different factors, the "best" technology may be one that best accommodates competing concerns, both environmental and economic. As the United States has explained to the Fifth Circuit, "[i]n contrast to the Second Circuit's reasoning, an interpretation that permits EPA to weigh benefits and costs in determining whether a technology is the 'best' gives full meaning to Section 316(b)'s text." U.S. Br. at 59.

Indeed, by taking sane judgment about relative costs and benefits off the table, the Second Circuit threatens to render the statute absurd. As technology advances, it is entirely possible that the ideal technological solution will change, perhaps dramatically, from one permitting period to the next. Under the Second Circuit's reasoning, existing

facilities could be at risk of having to invest collectively billions of dollars in retrofits every time their permit is up for renewal, if a new design is found to impinge or entrain marginally fewer fish. Congress obviously did not intend to make CWA compliance such a Sisyphean task.

EPA's interpretation is also supported by the legislative history, which states that "'best technology available' is intended to mean the best technology available commercially at an economically practicable cost." 69 Fed. Reg. 41,604 (quoting 118 Cong. Rec. 33,762). Although the Second Circuit acknowledged that EPA took its interpretation "directly from ... [this] floor speech—the only specific reference to section 316(b)," App.27a, it deemed the legislative history "problematic" and refused to give it weight because it did not accord with the court's own interpretation of the "more stringent BAT standard" under §301. App.27a. As explained above, however, the Second Circuit was simply wrong about what §301 means. The legislative history of §316(b) is entirely consistent with the Sixth and D.C. Circuit precedents under §301.

The Second Circuit's reasoning is also flatly inconsistent with the First Circuit's decision in *Seacoast*, which upheld EPA's use of cost-benefit analysis under §316(b) and has been *the* controlling standard for §316(b) permitting decisions for nearly 30 years. In *Seacoast*, the First Circuit considered an argument by environmental petitioners that §316(b) required an intake structure to be moved further offshore. 597 F.2d at 311. EPA declined to require the move on the sole basis that the costs "would be '*wholly disproportionate to any environmental benefit.*'" *Id.*

(emphasis added) (citation omitted). On appeal, the First Circuit affirmed EPA's use of cost-benefit analysis under that "wholly disproportionate" standard, reasoning that "[t]he legislative history clearly makes cost an acceptable consideration." *Id.* Notably, the First Circuit reached that conclusion prior to *Chevron*, without deference to EPA's interpretive discretion. The Second Circuit's decision here thus not only creates a circuit split, but also effectively holds that the First Circuit's *de novo* interpretation of the statute was so flawed as to be beyond the limits of *Chevron* deference. EPA's decision in the Phase II Rule to permit consideration of whether costs bear some "reasonable relationship" to environmental benefits is very similar to the "wholly disproportionate" test affirmed in *Seacoast*, and it is clear the First Circuit would have decided this case differently.

C. The Second Circuit Wrongly Presumed That Cost-Benefit Analysis Is Prohibited Unless Congress Expressly Authorizes It

The Second Circuit's holding also rests on an unprecedented presumption, drawn from a misunderstanding of *American Textile*, that cost-benefit analysis is barred unless Congress explicitly authorizes it. It placed great weight on the supposed "fact that Congress in establishing BTA *did not expressly permit* the Agency to consider the relationship of a technology's cost to [benefits]." App.22a (emphasis added). It observed that "[n]otably omitted from the list of permissible factors ... was the cost of technology in relation to the benefits." App.18a-

19a. Both observations are incorrect, since the statute *does* authorize EPA to consider both costs and benefits (indeed, any factors it deems relevant). But even if its premise were correct, the court's new clear statement rule would not be.

The Second Circuit selectively quoted this Court's observation in *American Textile* that "'[w]hen Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute.'" App.22a-23a (quoting *Am. Textile*, 452 U.S. at 509). But the issue in *American Textile* was whether the statute in question *mandated* cost-benefit analysis, not whether it was permissible. *See* 452 U.S. at 510-12 (rejecting "the argument that Congress required cost-benefit analysis"). The sentence quoted by the Second Circuit stands for the unexceptional proposition that cost-benefit analysis is not ordinarily mandated unless Congress has expressed such an intent. Notably, every court of appeals that has addressed *American Textile*'s impact on cost-benefit analysis has held that the case is limited to whether cost-benefit analysis is *required* by statute. *See NRDC v. EPA*, 824 F.2d 1146, 1159 n.6 (D.C. Cir. 1987) (en banc) ("*American Textile* would seem to be limited to the finding that ... the agency is not *required* to employ cost-benefit analysis.") (emphasis added); *Massachusetts v. Hayes*, 691 F.2d 57, 61 n.4 (1st Cir. 1982) ("The Court there held only that the statute ... did not *require* ... cost/benefit analysis.").

That understanding of *American Textile* is consistent with principles of *Chevron* deference, and completely inconsistent with the Second Circuit's reasoning. Statutory silence or ambiguity is ordinarily a "delegation[] of authority to the agency to fill the

statutory gap." *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 980 (2005). If the statute is silent on cost-benefit analysis, the agency is not required to consider it—as *American Textile* notes. But the Second Circuit's holding that EPA is *forbidden* by congressional silence from considering costs in relation to benefits intrudes on the agency's interpretive prerogatives no less than (and in exactly the same way as) the opposite presumption rejected in *American Textile*. "[A]gencies, not courts, ... fill statutory gaps." *Id.* at 982.

Numerous circuits have held that *Chevron* deference applies to whether an ambiguous statute permits, requires, or forbids cost-benefit analysis.[3] The Second Circuit's analysis is inconsistent with those cases, as the United States has explained in the Phase III litigation in characterizing that analysis as "flawed" and "fail[ing] to give appropriate deference." U.S. Br. at 60-61, 65 (citing *Sierra Club* and *Michigan*). Indeed, the United States pointed out that "[b]y assuming Congress's silence in Section 316(b) amounts to a prohibition on EPA's authority, the Second Circuit turns ... *Chevron* deference on its head." *Id.* at 61.

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[3] *See, e.g., Sierra Club v. EPA*, 375 F.3d 537, 541 (7th Cir. 2004); *Sierra Club v. EPA*, 314 F.3d 735, 744-45 (5th Cir. 2002); *Michigan v. EPA*, 213 F.3d 663, 678-79 (D.C. Cir. 2000); *BP Exploration*, 66 F.3d at 796; *Quivira Mining Co. v. U.S. Nuclear Regulatory Comm'n*, 866 F.2d 1246, 1258 (10th Cir. 1989); *Consol. Rail Corp. v. United States*, 855 F.2d 78, 85-86 (3d Cir. 1988); *see also* Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 Harv. L. Rev. 405, 487 (1989) (regulations must "impose benefits roughly commensurate with their costs, unless there is a clear legislative statement").

II. THE SECOND CIRCUIT'S RESTORATION HOLDING IS ERRONEOUS AND IN CONFLICT WITH OTHER CIRCUITS

Section 316(b) requires facilities to "minimiz[e] adverse environmental impact," but does not specify whether such impact must be minimized through the use of equipment-based technologies and operating measures, or by repairing or avoiding damage through restoration measures. As the Second Circuit acknowledged, restoration plays a very limited, cautious role in the Phase II Rule. "[A] facility must demonstrate that 'meeting the applicable performance standards or site-specific requirements through the use of design and construction technologies and/or operational measures alone is less feasible, less cost-effective, or less environmentally desirable than meeting the standards ... through the use of restoration measures,'" and that the proposed restoration measures will "produce ecological benefits 'at a level substantially similar' to what would be achieved by meeting the national performance standards" in other ways. App.12a (citing 40 C.F.R. §125.94(c)). Restoration has been an important part of EPA's interpretation of §316(b) for decades, and the Agency's determination that such measures are permissible is entitled to *Chevron* deference.

The Second Circuit concluded that the plain meaning of "minimiz[e]" requires the minimization of impingement and entrainment effects before they occur, and is inconsistent with "substitut[ing] after-the-fact compensation for adverse environmental impacts that have already occurred." App.43a-44a. The word "minimize" is hardly unambiguous, however, and that interpretation fails to engage with the complexity of

environmental regulation and the ambiguity of the words "adverse environmental impact," especially since, for example, the entrainment of large numbers of fish and shellfish larvae may have no such impact.[4] Because §316(b) (unlike §§301 and 306) requires the "best technology available" to achieve a specific ecological result ("minimizing adverse environmental impact"), EPA reasonably determined that it could consider "not only technologies but also their effects on and benefits to the water from which the cooling water is withdrawn." 69 Fed. Reg. at 41,583; *see also id.* ("the object of [BTA] is explicitly articulated by reference to the receiving water").

The First Circuit in *Seacoast* likewise understood that "adverse environmental impact" may consider effects on and benefits to the source waterbody—in that case, effects on overall fish populations.[5] 597 F.2d at 309-11 (analyzing impacts to fish populations, rather than individual fish, and affirming EPA). EPA's decision in the Phase II Rule that such "impact[s]" may

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[4] Because large-scale egg and larval losses are recognized by EPA and other governmental agencies as part of the life cycle of aquatic organisms, losses caused by intake structures may have no appreciable environmental effect.

[5] As *Seacoast* reflects, EPA and States have long defined "adverse environmental impact," in part, as impact to fish populations, rather than individual fish. EPA set the Phase II performance standards on the basis of reductions in individual fish impinged or entrained because this approach provides a "quick, certain, and consistent metric," 69 Fed. Reg. at 41,586, but nonetheless reiterated its authority to "minimiz[e] adverse environmental impact" by considering effects on and benefits to the source waterbody. *Id.* at 41,583. Restoration accomplishes this objective by "achiev[ing] comparable reductions" in those impacts. *Id.*

be "minimize[d]" by restoration is consistent with the statute and within EPA's discretion.

The Second Circuit also reasoned that restoration measures could not be considered because they "are not part of the location, design, construction, or capacity of ... intake structures." App.44a. But the statute requires the design and construction of intake structure to "reflect" BTA; it does not say that the technology must be physically incorporated into the intake structure itself. *See* 33 U.S.C. §1326(b); App.172a-76a. This argument is inconsistent with the rest of the Second Circuit's own analysis and ignores that other permissible technologies, such as barrier nets and the cooling towers apparently preferred by the Second Circuit, are similarly *not* part of the intake structure.

EPA's discretion on this point is further supported by the three decades that EPA and States have interpreted §316(b) to allow restoration. *Cf. Barnhart v. Walton*, 535 U.S. 212, 220 (2002) ("particular" deference "normally accord[ed] ... to an agency interpretation of longstanding duration"). Congress has never amended §316(b) to prohibit EPA from authorizing restoration projects for existing facilities. The absence of such action suggests that Congress intended EPA's longstanding interpretation or, at a minimum, has "understood [it] as statutorily permissible." *Id.*

The Second Circuit's decision also threatens EPA's practice of considering restoration measures in many environmental contexts, and upsets a well-established consensus among courts of appeals that such measures are permissible. EPA and other federal agencies have approved environmental mitigation measures as a

compliance alternative under (among other programs) CWA §404, the Endangered Species Act, the Fish and Wildlife Coordination Act, and the National Environmental Policy Act ("NEPA").[6]

Most of these statutes—like §316(b)—are silent or ambiguous as to whether restoration measures are permissible. Nonetheless courts have widely affirmed federal agencies' discretion to consider restoration or mitigation measures in making regulatory determinations under NEPA.[7] Similarly, the use of restoration measures in wetlands regulation has been upheld even though CWA §404 is silent as to restoration.[8] Departing from this broad national consensus, the Second Circuit appears to be the first court ever to conclude that an ambiguous statute bars the use of restoration measures.

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[6] *See* Thomas J. Schoenbaum & Richard B. Stewart, *The Role of Mitigation and Conservation Measures in Achieving Compliance with Environmental Regulatory Statutes: Lessons from Section 316 of the Clean Water Act*, 8 N.Y.U. Envtl. L.J. 237, 249-79 (2000) (analyzing statutes, regulations, and court decisions).

[7] *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 451 F.3d 1005, 1015-16 (9th Cir. 2006); *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1276-77 (10th Cir. 2004); *Spiller v. White*, 352 F.3d 235, 241 (5th Cir. 2003); *Sierra Club v. Army Corps of Eng'rs*, 295 F.3d 1209, 1220-21 (11th Cir. 2002); *Roanoke River Basin Ass'n v. Hudson*, 940 F.2d 58, 62-64 (4th Cir. 1991); *Cabinet Mountains Wilderness v. Peterson*, 685 F.2d 678, 682 (D.C. Cir. 1982).

[8] *City of Olmsted Falls v. EPA*, 435 F.3d 632, 637 (6th Cir. 2006); *Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 544-45 (11th Cir. 1996); *Town of Norfolk v. Army Corps of Eng'rs*, 968 F.2d 1438, 1448-50 (1st Cir. 1992).

III. THE SECOND CIRCUIT'S HOLDINGS RAISE QUESTIONS OF NATIONAL IMPORTANCE THAT MERIT REVIEW BY THIS COURT

A. The Panel's Cost-Benefit Holding Will Impose Enormous Costs and Disrupt National Environmental Policy

Without correction by this Court, the Second Circuit's decision will significantly affect our Nation's environmental priorities and impose substantial burdens on the country's already strained power supply. It also threatens to impose billions in compliance costs beyond what Congress intended.

The Second Circuit's decision creates great uncertainty nationwide about cost-benefit analysis under §316(b). Before promulgating a new Phase II rule on remand, EPA will have to decide whether to follow this decision when reviewing permits for facilities outside the Second Circuit, or instead follow the First Circuit's decision in *Seacoast* and the 30-year permitting history allowing cost-benefit analysis. (Indeed, if EPA adheres to the views it has expressed to the Fifth Circuit and refuses to follow this decision nationwide, the Second Circuit's decision may doom the effort to articulate consistent nationwide standards.) More than 700 facilities nationwide also must decide whether the permits they have relied upon for decades when making infrastructure investments are worth the paper they are printed on; and state permitting authorities will have to decide whether to reexamine and fundamentally alter many of those existing decisions.

This confusion and uncertainty will only increase if the United States persuades the Fifth Circuit to break with the Second Circuit in the Phase III litigation. If the Fifth Circuit holds that cost-benefit is allowed under §316(b), the United States and industry will not be able to seek certiorari. This Court may not have another opportunity to review the resulting deepened circuit split before facilities have to make new infrastructure investments.

The clear implication of the Second Circuit's opinion is that the court believes EPA should require all Phase II facilities to convert to closed-cycle cooling technology. *See, e.g.*, App.28a (court's "concern" "is further deepened by the Agency's rejection of closed-cycle cooling"); App. 30a-33a & n.16 (noting "seemingly large differences" between closed-cycle cooling and the Phase II performance standards, and "remand[ing] ... possibly for a new determination of BTA").

EPA exhaustively considered that option, however, and made an expert determination that closed-cycle cooling was *not* BTA for all Phase II facilities, citing the fact the other technologies "approach [its] performance, [and] concerns for energy impacts due to retrofitting," among other considerations. 69 Fed. Reg. at 41,605-06. For example, the record shows that the capital costs of retrofitting one of PSEG's plants with cooling towers—the 2300-megawatt Salem Generating Station—is an estimated $576 million. App.179a-80a. PSEG expects the total expense associated with closed-cycle retrofitting would rise to at least $1 billion. That is the likely cost of retrofitting *one* plant. EPA has estimated the cost of a closed-cycle cooling requirement at all Phase II facilities would be approximately $3.5 billion *annually*. 69 Fed. Reg. at

41,605. Furthermore, both EPA and Department of Energy believe this estimate understates the true costs significantly. *Id.*; App.141a-69a.

Beyond the direct costs of retrofitting and operating closed-cycle systems, the Second Circuit's decision threatens to impose enormous indirect economic burdens by impairing our Nation's electricity generating capacity. PSEG expects that a closed-cycle retrofit at the nuclear-powered Salem Generating Station would require partially suspending operations for at least 14 months, causing a net loss of 1150 megawatts, or half of its generating capacity, during that period. EPA has pegged "many other facilities" as having a down time of 10 months. 69 Fed. Reg. at 41,605. Many facilities, especially those with short remaining lives, may simply shut down or cancel planned repowerings. App.170a-71a.[9] Other facilities may be physically unable to install cooling towers. 69 Fed. Reg. at 41,605. Nonetheless the Second Circuit's opinion blithely accepts the bankruptcy or closure of numerous electricity generating facilities, without considering impacts to the U.S. electric supply, so long as "the cost of a given technology could be reasonably borne by the industry" *as a whole*. App.19a-23a.

Even for certain facilities where retrofitting with closed-cycle cooling systems is technologically possible (App.153a-54a), the conversion will produce 2.4 to 4%

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[9] *See also* North Am. Reliability Corp., *2007 Long-Term Reliability Assessment* at 97 (Oct. 2007) ("NERC Report"), *available at* ftp://www.nerc.com/pub/sys/all_updl/docs/pubs/LTRA2007.pdf (federally-certified electric reliability organization stating that "prohibitive" retrofitting costs may cause "many older plants" to retire, "potentially jeopardizing resource adequacy in many regions").

less electricity on average due to the lower energy output, or "energy penalty," associated with that less efficient technology—including in areas of the country already energy-constrained. 69 Fed. Reg. at 41,605 (estimated energy penalty of 5.3% for nuclear plant providing 78% of Vermont's electricity); *see also* App152a-53a; NERC Report at 97 (loss would represent "12 percent reduction in available capacity margin"). As the Department of Energy warned, this loss of efficiency is greatest in summer months, when the energy demand is highest. Much of these costs—monetary costs and increased risk of blackouts—will be incurred by the public, as consumers of electric power. 69 Fed. Reg. at 41,654-55. Money spent on closed-cycle cooling will actually frustrate the Department of Energy's efforts to improve reliability and generating capacity of the power grid. App.151a-56a, 163a-71a.

Even from a pure environmental standpoint, the electricity lost from that decrease in generating efficiency, and from taking nuclear plants offline for extended periods, will require more consumption of fossil fuels, which, in turn, will increase emissions of pollutants including sulfur dioxide, carbon dioxide, NO_x, and mercury. *See* 69 Fed. Reg. at 41,605. The Second Circuit's misreading of §316(b) also threatens to force EPA and facilities to prioritize marginal reductions in impingement and entrainment mortality over competing environmental priorities. For example, capital spent on retrofitting will not be available to fund other environmental objectives, such as greenhouse gas reduction. And given the Second Circuit's astonishingly unpragmatic interpretation of §316(b), there is no guarantee that those opportunity

costs will result in any significant benefit to aquatic life.

This decision may also sweep far broader than §316(b). As discussed above, the Second Circuit held that the "best available technology" standard under §301, which governs most toxic effluent *discharges*, also forbids any consideration of cost-benefit analysis. App.18a-21a. This holding, which conflicts with the analysis of *every* circuit that has considered the issue, will be enormously disruptive to EPA's implementation of the CWA. It invites a rash of challenges to NPDES permits whenever plaintiffs can establish venue in the Second Circuit, fragmenting national environmental policy. The panel's new clear statement rule barring cost-benefit analysis whenever a statute is silent on the issue is even more dangerous, threatening agency discretion and the validity of countless regulations. Indeed, respondents are already contending in the Phase III litigation that cost-benefit analysis is forbidden because §316(b) "includes no language whatsoever authorizing [it]." Enviro. Pets. Br. at 48. If *Riverkeeper II* stands, similar challenges under other statutes will follow.

B. Restoration Measures Provide A Critically Important Policy Tool

The Second Circuit's decision also raises questions of national importance by invalidating an exceptionally valuable, widely-used environmental policy tool. Before the *Riverkeeper* decisions, EPA and States had relied on restoration measures in §316(b) permitting decisions for three decades. From that experience, EPA concluded that restoration measures are often "more cost-effective, more feasible or more

environmentally beneficial." App.190a.

States have similarly supported restoration measures for existing facilities because they provide "critical" regulatory flexibility. App.184a-87a (Maryland); App.191a (Tennessee). Six *amici* States—Texas, Alabama, Indiana, Kentucky, Nebraska, and North Dakota—explained below that restoration is valuable not only because it provides that essential flexibility, but because it "provides ... broader ecosystem benefits." State *Amici* Br. at 4-8.

Restoration efforts indisputably have benefited the environment on a massive scale, with PSEG alone preserving or restoring more than 20,000 acres of wetlands. Without intervention by this Court, this valuable policy tool will be lost—for no reason other than linguistic hair-splitting, and to the detriment of these environmental protection efforts.

CONCLUSION

The petition for certiorari should be granted.

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